

**The Free State Foundation**  
**P. O. Box 60680**  
**Potomac, MD 20859**  
**301-984-8253**

June 20, 2017

**Re: WC Docket No. 17-108; Restoring Internet Freedom**

**EX PARTE WRITTEN SUBMISSION**

Ms. Marlene Dortch, Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

Dear Ms. Dortch:

In its Notice of Proposed Rulemaking in the above-referenced *Restoring Internet Freedom* proceeding, the Commission specifically requests comment concerning the impact on investment of Title II regulation and other aspects of the Commission's 2015 *Title II Order*. The Free State Foundation plans to submit comments and reply comments in this proceeding at the appropriate time addressing the impact of public utility-like or heavy-handed regulation on Internet service providers' investment incentives, along with responses to other aspects of the NPRM.

But at this time, in light of the importance of the questions surrounding investment impact, I am submitting for inclusion in the record the following two Free State Foundation papers authored by FSF Senior Fellow, Theodore Bolema. (Dr. Bolema received his Ph.D. in Economics from Michigan State University and his J.D. from the University of Michigan Law School.)

- ["Too Much Unnecessary Regulation Is Impeding Telecom Investment,"](#) *Perspectives from FSF Scholars*, Vol. 12, No. 13, April 17, 2017. Appendix A.
- ["Allow Paid Prioritization on the Internet for More, Not Less, Capital Investment,"](#) *Perspectives from FSF Scholars*, Vol. 12, No. 16, May 1, 2017. Appendix B.

The complete *Perspectives*, with citations to authorities, should be consulted. But brief excerpts from each of the two papers follow:

**"Too Much Unnecessary Regulation Is Impeding Telecom Investment"**

The *Open Internet Order* was justified in part by claims that imposing common-carrier rules would not deter capital investment and that innovation among edge providers would flourish. Instead, the opposite has happened. As Chairman Pai explained: "After the FCC embraced utility-style regulation, the United States experienced the first-ever decline in broadband investment outside of a recession. In fact, broadband investment remains

lower today than it was when the FCC changed course in 2015.” This decline in domestic broadband capital expenditures was \$3.6 billion in 2016, or 5.6%, relative to 2014 levels. [Citations omitted here].

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When the FCC adopted the *Open Internet* Order in 2015, the “bet made by then-Chairman Tom Wheeler was that investment at the core of the network would not be phased by common-carrier rules, and innovation among edge providers would flourish.” Many at the time, including Free State Foundation scholars, questioned this presumption. Instead, the opposite has happened. As Chairman Pai explained:

However, two years ago, the United States deviated from our successful, light-touch approach. The FCC decided to apply last-century, utility-style regulation to today’s broadband networks. Rules developed to tame a 1930s monopoly were imported into the 21st century to regulate the Internet. This reversal wasn’t necessary to solve any problem; we were not living in a digital dystopia. The policies of the Clinton Administration, the Bush Administration, and the first term of the Obama Administration had produced both a free and open Internet and strong incentives for private investment in broadband infrastructure.

Two years later, it has become evident that the FCC made a mistake. Our new approach injected tremendous uncertainty into the broadband market. And uncertainty is the enemy of growth. After the FCC embraced utility-style regulation, the United States experienced the first-ever decline in broadband investment outside of a recession. In fact, broadband investment remains lower today than it was when the FCC changed course in 2015. [Citations omitted here].

### **“Allow Paid Prioritization on the Internet for More, Not Less, Capital Investment”**

The FCC’s justification for banning paid prioritization is little more than the theory of how a monopolist protected from competition can restrict output in order to drive up prices. This theory does not apply, however, when a broadband provider does not have a large enough market share and faces current competition, because any attempts to extract high and inefficient tolls will be defeated when customers switch to a competing provider.

Moreover, if entry by other providers is reasonably easy, even a firm that is currently a monopolist will see that any inefficient tolls it imposes will only give other providers more incentive to enter the market and take its customers. When entry like this can occur, profits based on taking advantage of leverage from high market shares in a dynamic market are not sustainable because they attract new investment and entry by competitors.

Rather than address any possible concerns, however conjectural, about consumer harm in ways that will encourage more competition, the FCC chose to take a regulatory approach that will only discourage new entry and investment by ISPs. Limiting the revenue streams and pricing arrangements for new entrants reduces their incentive to make the

investments necessary to enter and compete effectively against current broadband providers.

In light of the importance of ongoing substantial investment by Internet service providers to the deployment and upgrading of reliable high-speed Internet services, issues relating to the adverse effect of the FCC's regulation of Internet service providers on their investment incentives are extremely important.<sup>1</sup> Indeed, the outcome of this proceeding necessarily will have a significant impact on the build-out and modernization of advanced broadband networks, both wireline and wireless – and no one doubts that such networks are a key part of our nation's 21<sup>st</sup> Century infrastructure.

Thank you for including this submission in the *Restoring Internet Freedom* record.

Sincerely,

Randolph J. May

President, The Free State Foundation  
The Free State Foundation

cc: The Honorable Ajit Pai  
The Honorable Mignon Clyburn  
The Honorable Michael O'Rielly

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<sup>1</sup> Also see Michael Horney, Free State Foundation Blog, "Broadband Investment Slowed by \$5.6 Billion Since Open Internet Order," May 5, 2017, <http://freestatefoundation.blogspot.com/2017/05/broadband-investment-slowed-by-56.html> (estimating "that foregone investment in 2015 and 2016 was about \$5.6 billion, an amount providers likely would have invested in a business climate without Title II public utility regulation").



***Perspectives from FSF Scholars***  
***April 17, 2017***  
***Vol. 12, No. 13***

**Too Much Unnecessary Regulation Is Impeding Telecom Investment**

**by**

**Theodore R. Bolema\***

**I. Introduction and Summary**

The telecommunications sector of the U.S. economy is far different today than it was when its principal regulatory structure was created. With respect to telecommunications services, the Communications Act of 1934 was enacted to impose control over perceived monopolies that provided analog services. Its main regulatory structure still largely exists even though today's broadband, digital, and wireless technologies and services do not raise the same regulatory concerns as the technologies and services of the last century.

Without doubt, regulatory controls that have outlived their intended purposes are holding back new investment that otherwise would lead to greater innovation, new competition, and significant benefits for American customers. So it is significant that FCC Chairman Ajit Pai has declared April 2017 to be "Infrastructure Month" as the agency considers several proposals aimed at reducing the cost of broadband deployment and eliminating unnecessary rules that impede its deployment.<sup>2</sup> This focus by Chairman Pai on enhancing infrastructure deployment by curtailing unnecessary regulation is a welcome development. Building out new infrastructure and upgrading existing infrastructure requires encouraging capital investment, yet recently regulatory policies too frequently have done the opposite.

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<sup>2</sup> Ajit Pai, "Infrastructure Month at the FCC," FCC, March 30, 2017, available at <https://www.fcc.gov/news-events/blog/2017/03/30/infrastructure-month-fcc>.

Chairman Pai earlier this year summarized his vision for encouraging broadband investment:

In short, America’s approach to broadband policy will be practical, not ideological. We will embrace what works and dispense with what doesn’t. That means removing barriers to innovation and investment instead of creating new ones. That means taking targeted action to address real problems in the marketplace instead of imposing broad, preemptive regulations. And that means respecting principles of economics, physics, and law and acting with humility as we regulate one of the most dynamic marketplaces history has ever known. This vision will unleash the massive investments that will help the United States realize its 5G future.<sup>3</sup>

Applying the principles from my previous [Perspectives](#) that explained, as a general proposition, why more regulation means less investment, this new *Perspectives* reviews recent analysis showing how the accumulating regulatory burdens has led to less investment generally in the telecommunication sector. It then applies these principles to three current regulatory issues that have significant implications for telecommunications investment: The *Open Internet* order, small cell wireless network buildout, and the possible re-introduction of price regulation over business data services.

Telecommunications, a sector that should be leading the way in innovation, continues to be too heavily regulated. While some eras are characterized by great regulatory accumulation and others by little or no accumulation, the direction, especially in the last several years of the Wheeler Commission, has been continuously toward imposing more regulatory burdens. Many of these regulations are now outdated due to changes in markets and technologies. Other regulations are overly broad and prescriptive, or not designed to address market failures. Often these regulations were designed to try to anticipate possible harms, even when these harms were unlikely to materialize.

The slow post-recovery growth of the U.S. economy has been accompanied by weak capital investment, which has grown more slowly than in any post-recession period since the Great Depression. As weak as recent economic growth has been in the U.S. economy as a whole, the economy outside the telecommunications sector has outperformed the telecommunications sector, which has fallen from 2.6% of GDP at the end of the last recession to 2.3% in 2016.

Weak growth in the telecommunications sector is a problem not only for telecommunication firms, but for firms and entrepreneurs throughout the economy that depend on telecommunications in their businesses and for their own innovation. As Chairman Pai explained:

Today, with a powerful plan and a broadband connection, you can raise capital, start a business, immediately reach customers worldwide, and disrupt entire industries. Never

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<sup>3</sup> Ajit Pai, “Remarks of Federal Communications Commission Chairman Ajit Pai at the Mobile World Congress,” (speech, Barcelona, Spain, February 28, 2017), available at <https://www.fcc.gov/document/chairman-pais-keynote-mobile-worldcongress-barcelona>.

before in history has there been such opportunity for entrepreneurs with drive and determination to transcend their individual circumstances and transform their world.

And achieving this success does not require you to move to Silicon Valley or Stockholm or Seoul or any other tech hub around the world. There are opportunities in every city in every corner of the world, *if* – and this is a big if – you have high-speed access to the Internet.<sup>4</sup>

Several current proceedings before the FCC directly implicate the fundamental question: How to best promote capital investment through regulatory policy? This *Perspectives* will briefly describe the investment issues raised in three of the current policy debates that have significant implications for telecommunications investment: The *Open Internet* Order of 2015, the barriers to small cell deployment needed for the 5G network, and the current rules for business data services (BDS).

The *Open Internet* Order was justified in part by claims that imposing common-carrier rules would not deter capital investment and that innovation among edge providers would flourish.<sup>5</sup> Instead, the opposite has happened. As Chairman Pai explained: “After the FCC embraced utility-style regulation, the United States experienced the first-ever decline in broadband investment outside of a recession. In fact, broadband investment remains lower today than it was when the FCC changed course in 2015.”<sup>6</sup> This decline in domestic broadband capital expenditures was \$3.6 billion in 2016, or 5.6%, relative to 2014 levels.<sup>7</sup>

The small cell deployment needed for the 5G network wireless technology is well underway, as wireless access points placed on existing utility poles are replacing tall cell towers. Millions of small cells are needed for the multi-gigabit connectivity for future 5G networks. Small cell technology does not raise the same concerns as large towers, but is covered by the same regulations, and thus is facing regulatory impediments at both the federal and local level. Chairman Pai points out that “the more difficult government makes the business case for deployment, the less likely it is that broadband providers big and small will invest the billions of dollars needed to connect consumers with digital opportunity.”<sup>8</sup> The FCC is considering ways to expedite state and local approvals, as well as changes to the FCC’s own rules that would facilitate network deployment.<sup>9</sup>

BDS involves network connections over dedicated broadband network facilities to securely move large amounts of data, such as credit card transactions. BDS services were largely deregulated in the late 1990s, after the FCC determined they were largely competitive. Today, nearly all of the country is served by multiple BDS providers, with only a small part of the

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<sup>4</sup> *Id.*

<sup>5</sup> Hal Singer, “Bad Bet by FCC Sparks Capital Flight from Broadband,” *Forbes*, March 2, 2017, available at <https://www.forbes.com/sites/washingtonbytes/2017/03/02/capital-flight-from-broadband-in-the-title-ii-era/#487767de35cf>.

<sup>6</sup> Pai, *supra* note 2.

<sup>7</sup> Hal Singer, “2016 Broadband Capex Survey: Tracking Investment in the Title II Era,” March 1, 2017, available at <https://haljsinger.wordpress.com/2017/03/01/2016-broadband-capex-survey-tracking-investment-in-the-title-ii-era/>.

<sup>8</sup> Pai, *supra* note 2.

<sup>9</sup> Pai, *supra* note 1.

population living in rural areas that lack service providers. For several years, the FCC has been considering imposing new rate controls on this market, even on new entrants, and requiring BDS providers to lease access to their facilities to competitors at regulated rates. This forced sharing will discourage capital investment and eventually will lead to artificial scarcities in the network infrastructure, because providers that own the existing infrastructure will be discouraged from improving the network when they know they will have to lease the improved facilities to their competitors at regulated rates. And investment by new entrants will be discouraged as well so long as they perceive themselves to be the beneficiaries of regulated rates.<sup>10</sup>

The slowing of capital investment in telecommunications markets was notable in the final years of the Wheeler Commission, as the growth of the telecommunications regulatory burden has accelerated. So far, under Chairman Ajit Pai's leadership, the FCC has demonstrated a welcome interest in encouraging new capital investment by eliminating or curtailing those regulations that no longer are necessary. Reducing the regulatory burden on the telecommunications sector promises to unleash capital investment in broadband deployment and the evolving business data services markets, among others, which would give the overall economy a greatly needed boost.

## **II. The Importance of Telecommunications Investment to the U.S. Economy**

The U.S. economy has a capital investment problem. Recent U.S. private business investment has grown more slowly than in any other post-recession period since the Great Depression.<sup>11</sup> Capital investment drives economic growth, which is the primary source of job creation and improvements in workers' productivity and wages.

Slow capital investment in advanced broadband facilities is particularly a problem because of broadband's increasing importance to the economy as a whole. The broadcast and telecommunications sector of the U.S. economy is an important part of the U.S. economy in and of itself, accounting for 2.3% of the U.S. GDP in the first three quarters of 2016. This sector is growing more slowly than the rest of the U.S. economy since the end of the last recession, with its share of GDP dropping from 2.6% of GDP in 2008 and 2009.<sup>12</sup>

The impact of telecommunication investment spreads far beyond its own sector, affecting many other sectors of the economy. Telecommunications is used by firms in other sectors as a crucial part of their production process, for marketing their products, and for placing orders and credit validation to facilitate business transactions. Innovative new products are emerging, building on the telecommunications facilities created from past investment. As Chairman Pai recently noted: "Broadband has also made many sectors of the economy more productive, from shipping to

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<sup>10</sup> Seth L. Cooper, "FCC's New Regulations Threaten Broadband Investment, The Hill, October 17, 2016, available at <http://thehill.com/blogs/pundits-blog/technology/301276-fccs-new-regulations-threaten-broadband-investment>.

<sup>11</sup> Mark P. Keightley Marc Labonte and Jeffrey M. Stupak, "Slow Growth in the Current U.S. Economic Expansion," Congressional Research Service, June 24, 2016, at 20, available at <https://fas.org/sgp/crs/misc/R44543.pdf>.

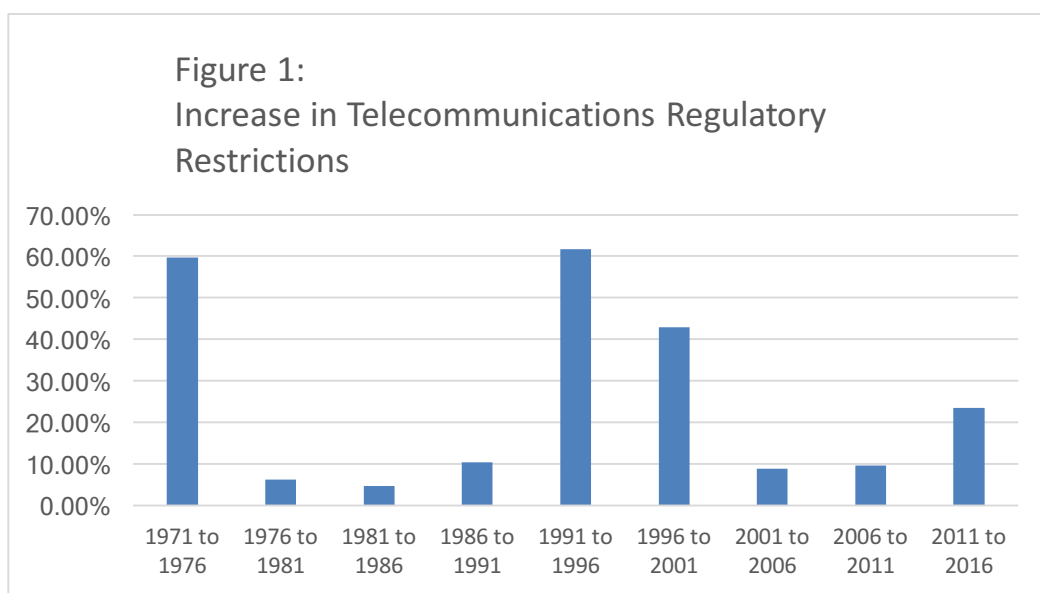
<sup>12</sup> Bureau of Economic Analysis, U.S. Department of Commerce, "Industry Economic Accounts Underlying Detail," January 19, 2017 release, available at <https://www.bea.gov/iTable/iTable.cfm?reqid=56&step=2&isuri=1#reqid=56&step=51&isuri=1&5602=5>.

energy. And it's given birth to entirely new industries, like the mobile apps economy, telemedicine, online education, and the nascent Internet of Things.”<sup>13</sup>

### III. The Accumulation of Telecommunications Regulations

The U.S. telecommunications sector has experienced ongoing and consistent increases in regulation over time. Figure 1 shows the accumulation of telecommunications federal regulations, using the RegData database, which provides data for telecommunication sector regulations for every year since 1971. RegData measures regulatory restrictions at the industry level at the two, three, and four-digit levels of the North American Industry Classification System (NAICS).<sup>14</sup>

RegData is particularly useful because it is an industry-specific quantification of federal regulation that counts the number of actual regulatory restrictions using text analysis of the *Code of Federal Regulations* (CFR), rather than relying on proxies like the number of pages in the CFR or the *Federal Register*. NAICS category 517 is for the telecommunications industry, and it includes wired and wireless telephone and Internet carriers, including voice over Internet protocols, cable and satellite distribution services, and telecommunications reselling services.<sup>15</sup>



Source: RegData for 3-digit Industry Code 517: Telecommunications.

Note: Increase for 2011 to 2016 is from 2011 to 2014, then extrapolated to 2016 to make it comparable as a five-year time period for regulatory change.

<sup>13</sup> Pai, *supra* note 1.

<sup>14</sup> Al-Ubaydli, O. and McLaughlin, P.A. (2015) “RegData: A Numerical Database on Industry-specific Regulations for all United States Industries and Federal Regulations, 1997-2012.” *Regulation & Governance*, December 16, 2015. RegData uses text analysis to count binding constraints in the wording of regulations, as codified in the Code of Federal Regulations, and to measure the applicability of regulatory texts to different industries.

<sup>15</sup> Bureau of Economic Analysis, U.S. Department of Commerce, “Industries at a Glance: Telecommunications: NAICS 517,” available at <https://www.bls.gov/iag/tgs/iag517.htm>.



Federal regulatory restrictions have increased in the U.S. telecommunication sector in every five-year period in Figure 1, although the increases vary greatly. These increases are net changes in the amount of federal restrictions in the different time periods, taking into account both regulations that are added and regulations that are removed. These increases are limited to changes in federal regulation only, so they do not include regulatory burdens created at the state or local level.

The trend for the telecommunications sector is a steady increase in regulatory accumulation that has never been reversed. Some legislation and FCC regimes resulted in little or no increase, but the accumulated federal regulatory restrictions on the telecommunications sector never decreased in any five-year time period.<sup>16</sup> As regulations are added, the amount of interaction between regulations increases, so that the negative effect of regulatory accumulation results in a compounding effect as new regulations continue to accumulate.<sup>17</sup>

## **Regulation and Telecommunications Investment**

In my previous *Perspectives*, I identified four ways that unnecessary or outdated regulations adversely affect the amount of investment. Each of them can be observed with telecommunications regulations.

- First, regulations may discourage new entry and the investments made by new entrants, and may reduce the incentive for incumbent firms to invest once they are protected from new competition. Some regulations directly impede entry through licenses, permits, minimum capital requirements, and other restrictions on new firms. Even regulations that were promoted as encouraging investment by new firms can have the opposite effect. Michał Grajek and Lars-Hendrik Röller, economics professors at the ESMT European School of Management and Technology in Berlin, find that the European Union open access approach “discourages entrants’ individual investment even as entry and total investment by entrants increases. Because facilities-based entry is likely to require substantial firm-level investment, our results are consistent with the view that the regulatory framework in Europe fails to deliver effective incentives to move toward facilities-based competition.”<sup>18</sup>
- Second, regulation often creates uncertainty about what the regulation means and how it will be enforced. The possibility of changing regulatory requirements also adds to their uncertainty. Hal Singer, Senior Fellow at the Progressive Policy Institute, notes that in response to the uncertainty created by the FCC’s 2015 *Open Internet* Order, internet service providers (ISPs) “will likely hedge against this new regulatory risk by conserving cash or paying out dividends rather than investing in continued network improvements.

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<sup>16</sup> RegData shows some isolated individual years that experienced net decreases in telecommunications restrictions. The most recent decrease was by 0.7 percent in 2006.

<sup>17</sup> See Michael Mandel and Diana G. Carew, “Regulatory Improvement Commission: A Politically-Viable Approach to U.S. Regulatory Reform” (Policy Memo, Progressive Policy Institute, Washington, DC, May 2013), available at <http://www.progressivepolicy.org/2013/05/regulatory-improvement-commission-a-politically-viable-approach-to-u-s-regulatory-reform/>.

<sup>18</sup> Michał Grajek and Lars-Hendrik Röller, “Regulation and Investment in Network Industries: Evidence from European Telecoms,” *The Journal of Law & Economics*, Vol. 55, No. 1, February 2012, 189, 211.

This reduction is not academic: In the few months since the *Open Internet* Order was released, several small ISPs announced their intention to abandon investment plans due to heightened uncertainty injected by the reclassification.”<sup>19</sup>

- Third, resources used to comply with regulations are not available for more productive capital investment purposes. Clyde Wayne Crews Jr., Policy Director at Competitive Enterprise Institute, estimates the annual compliance costs for FCC regulations at \$132 billion.<sup>20</sup> Regulatory compliance requirements divert resources that would have been available for investment. Moreover, regulations that do not address market failures, or which outlive their purposes, impose costs that greatly outweigh their benefits.<sup>21</sup>
- Fourth, firms may move their investment overseas, where the regulatory burdens are lower. In June of 2015, shortly after the *Open Internet* Order was enacted, AT&T announced that it would invest [\\$3 billion in Mexico](#) to extend mobile Internet to 100 million consumers and businesses by 2018.<sup>22</sup> As a result, the reach of the Internet will be extended in Mexico, while the U.S. economy will lose the jobs and economic activity that would be directly associated with this investment.

The emergence of cross-platform competition for data, video, and voice services presents a particular problem for accumulated telecommunications regulations. The old regulatory structures did not anticipate this competitive development enabled by technological advances and the digital revolution. The result is uneven application of regulation, which discourages investment by the platforms most restricted by regulation. This also potentially reduces the incentive for the less regulated platforms to invest because they may be insulated from cross-platform competition.

Even when regulatory compliance compels more investment spending, it will alter the mix of regulations, which introduces distortions that usually do not produce new or improved goods and services that consumers value more than those they had to give up.<sup>23</sup> These types of investments crowd out beneficial investment activity in favor of investments offering fewer benefits.<sup>24</sup>

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<sup>19</sup> Hal Singer, “Three Ways the FCC’s Open Internet Order Will Harm Innovation,” Policy Memo, Progressive Policy Institute, Washington, DC, May 2013), at 3–4, available at <http://www.progressivepolicy.org/issues/economy/three-ways-the-fccs-open-internet-order-will-harm-innovation/>.

<sup>20</sup> Crews Jr., Clyde Wayne, “Tip of the Costberg: On the Invalidity of All Cost of Regulation Estimates and the Need to Compile Them Anyway,” 2017 Edition, January 8, 2017, available at SSRN: <https://ssrn.com/abstract=2502883> or <http://dx.doi.org/10.2139/ssrn.2502883>.

<sup>21</sup> See Patrick A. McLaughlin and Richard Williams, “The Consequences of Regulatory Accumulation and a Proposed Solution Patrick,” Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, February 11, 2014, available at <https://www.mercatus.org/publication/consequences-regulatory-accumulation-and-proposed-solution>.

<sup>22</sup> Hal Singer, “Does the Tumble in Broadband Investment Spell Doom for the FCC’s Open Internet Order?” *Forbes*, August 25, 2015, available at <https://www.forbes.com/sites/halsinger/2015/08/25/does-the-tumble-in-broadband-investment-spell-doom-for-the-fccs-open-internet-order/2/#7c9c3e434854>.

<sup>23</sup> Richard Williams, “The Impact of Regulation on Investment and the U.S. Economy,” Policy Briefing, January 11, 2011, available at <https://www.mercatus.org/system/files/House%20Oversight%20Response%20on%20Regulations%20and%20Economy%5B2%5D.pdf>.

<sup>24</sup> John W. Mayo, “Regulation and Investment: Sk(r)ewing the Future for 21st Century Telecommunications?” Economic Policy Vignette, Georgetown Center for Business and Public Policy, Washington, DC, June 2016,

Professor Richard A. Epstein of the New York University School of Law and a member of the Free State Foundation Board of Academic Advisors, summarizes the importance of investment in telecommunication as follows:

The adjudication with respect to our telecommunications systems in the next generation will determine, for better or for worse, whether or not this nation, or other nations, will maintain its energetic drive. Every time tough regulations apply to networks, content providers will benefit to some extent in the short run but at the cost of retarding additional investment in the network itself. Voluntary arrangements are still the best way to determine the optimal way to structure interactions between content providers and carriers outside the control of the regulatory state. In the short term, the battle over the Internet may well look like some form of second-best monopolistic competition. Nonetheless, in the long run, allowing technology to be free from regulation will make the system both more competitive and more efficient. The weight of the evidence supports light-handed regulation.<sup>25</sup>

### **Current Regulatory Issues with Investment Implications**

Several current issues in telecommunications policy directly implicate the fundamental question: How to best promote capital investment through regulatory policy, including the infrastructure issues described in Chairman Pai's recent statement?<sup>26</sup> Investment issues raised in three of the current policy debates – the *Open Internet* Order of 2015, the barriers to small cell deployment needed for the 5G network, and the current rules for business data services (BDS) – are described below.

#### 1. The *Open Internet* Order

When the FCC adopted the *Open Internet* Order in 2015, the “bet made by then-Chairman Tom Wheeler was that investment at the core of the network would not be phased by common-carrier rules, and innovation among edge providers would flourish.”<sup>27</sup> Many at the time, including Free State Foundation scholars, questioned this presumption.<sup>28</sup> Instead, the opposite has happened. As Chairman Pai explained:

However, two years ago, the United States deviated from our successful, light-touch approach. The FCC decided to apply last-century, utility-style regulation to today's broadband networks. Rules developed to tame a 1930s monopoly were imported into the 21st century to regulate the Internet. This reversal wasn't necessary to solve any problem;

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available at <http://cbpp.georgetown.edu/publications/regulation-and-investment-skewing-future-21st-century-telecommunications>.

<sup>25</sup> Richard A. Epstein, "Can Technological Innovation Survive Government Regulation?" 36 *Harvard Journal of Law & Public Policy* 87, 97 (2013).

<sup>26</sup> Pai, *supra* note 1.

<sup>27</sup> Singer, *supra* note 5.

<sup>28</sup> See Randolph J. May, "[We Told You So: Title II Regulation Harms Investment](http://freestatefoundation.blogspot.com/2015/09/we-told-you-so-title-ii-regulation.html)," Free State Foundation, September 10, 2015, available at <http://freestatefoundation.blogspot.com/2015/09/we-told-you-so-title-ii-regulation.html>.

we were not living in a digital dystopia. The policies of the Clinton Administration, the Bush Administration, and the first term of the Obama Administration had produced both a free and open Internet *and* strong incentives for private investment in broadband infrastructure.

Two years later, it has become evident that the FCC made a mistake. Our new approach injected tremendous uncertainty into the broadband market. And uncertainty is the enemy of growth. After the FCC embraced utility-style regulation, the United States experienced the first-ever decline in broadband investment outside of a recession. In fact, broadband investment remains lower today than it was when the FCC changed course in 2015.<sup>29</sup>

This decline in domestic broadband capital expenditures was \$3.6 billion in 2016, or 5.6%, relative to 2014 levels.<sup>30</sup> As noted earlier, AT&T also shifted some of its capital investment to Mexico soon after the order. This decline stands in contrast to what happened after the prior “light touch” regulatory policy toward the Internet was upheld by the Supreme Court in *NCTA v. Brand X* (2005).<sup>31</sup> In the decade that followed that decision, total broadband industry capital investment totaled approximately \$695 billion.<sup>32</sup>

## 2. Small Cell Wireless Infrastructure Deployment

Wireless technology is moving toward small cells, or wireless access points that can be installed on existing utility poles and inside buildings in densely populated cities, which are replacing tall cell towers. Millions of small cells are needed for the multi-gigabit connectivity for future 5G networks. In a recent filing, CTIA claimed:

In just seven years, wireless providers spent \$200 billion in network improvements to deliver 4G LTE mobile broadband nationwide.... One recent study estimates that wireless operators will invest \$275 billion dollars over the next decade to deploy 5G to consumers. As a result of that investment, 5G is expected to create three million new jobs in communities of all sizes across the country and boost the U.S. GDP by half a trillion dollars.”<sup>33</sup>

This deployment is well underway, but there are regulatory challenges at both the federal and local level.<sup>34</sup> Small cell technology does not raise the same concerns as large towers, but is covered by the same regulations.

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<sup>29</sup> Pai, *supra* note 2.

<sup>30</sup> Singer, *supra* note 7.

<sup>31</sup> 545 U.S. 967 (2005).

<sup>32</sup> Patrick Brogan, “Broadband Investment Gains Continued in 2014: Research Brief,” USTelecom (Chart 2), July 24, 2015, available at <https://www.ustelecom.org/sites/default/files/documents/Investment-2014-Research-Brief-July-2015.pdf>.

<sup>33</sup> Comments of CTIA in Response to the Commission's December 23, 2016 Order Seeking Comments on Streamlining Deployment of Small Cell Infrastructure, WT Docket No. 16-421 (March 8, 2017), 6-7.

<sup>34</sup> See Kathy Hoekstra, “Nebraska Bill Would End Cities’ Big Haul for Small Cells, watchdog.org, March 31, 2017, available at <http://watchdog.org/292312/nebraska-small-cells-bill/>.

The FCC is considering ways to expedite state and local approvals, as well as the FCC's own rules.<sup>35</sup> Chairman Pai explained the importance of removing the regulatory barriers to small cell deployment and broadband investment generally:

From my perspective, then, the key to realizing our 5G future is to set rules that will maximize investment in broadband. For if we don't, the price could be steep. After all, networks don't have to be built. Risks don't have to be taken. Capital doesn't have to be spent in the communications sector. And the more difficult government makes the business case for deployment, the less likely it is that broadband providers big and small will invest the billions of dollars needed to connect consumers with digital opportunity.<sup>36</sup>

### 3. Business Data Services

The FCC is currently considering revising its rules for BDS, which is sometimes called "special access." BDS involves network connections over dedicated broadband network facilities to securely move large amounts of data, such as credit card transactions. These facilities are primarily used by businesses and government entities, and rarely by residential customers.

BDS services were largely deregulated in the late 1990s, after the FCC determined they were largely competitive.<sup>37</sup> BDS providers and their business customers negotiate prices, terms of service, and performance guarantees with little government oversight, in the same way that business negotiations occur in other unregulated markets. Today, the vast majority of the country is served by multiple BDS providers, with only a small part of the population living in rural areas that lack service providers.

The current BDS market owes much of its success to private capital investments in the BDS network. Cable operators have also entered the market, and compete on an increasingly large scale with the incumbent BDS providers who created the market. Non-cable competitors also provide BDS services.<sup>38</sup> Yet for several years, the FCC has been considering imposing new rate controls on this market, even on new entrants, and requiring BDS providers to lease access to their facilities to competitors at regulated rates.

Justice Breyer explained the problem regarding diminished investment and innovation with this type of mandatory leasing arrangement in his concurring opinion in *AT&T v. Iowa Utilities Board*<sup>39</sup>:

Moreover, a sharing requirement may diminish the original owner's incentive to keep up or to improve the property by depriving the owner of the fruits of value-creating investment, research, or labor. . . . Nor can one guarantee that firms will undertake the investment necessary to produce complex technological innovations knowing that any

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<sup>35</sup> Pai, *supra* note 1.

<sup>36</sup> Pai, *supra* note 2.

<sup>37</sup> Cooper, *supra* note 10.

<sup>38</sup> Seth L. Cooper, "Proposed BDS Rate Controls Are Anti-Investment, Arbitrary, and Fact-Challenged, Free State Foundation, November 14, 2016, available at <http://freestatefoundation.blogspot.com/2015/12/regulatory-uncertainty-harms-broadband.html>.

<sup>39</sup> 525 U.S. 326 (1999).

competitive advantage deriving from those innovations will be dissipated by the sharing requirement.

It is in the *unshared*, not in the shared, portions of the enterprise that meaningful competition would likely emerge. Rules that force firms to share *every* resource or element of a business would create, not competition, but pervasive regulation, for the regulators, not the marketplace, would set the relevant terms.<sup>40</sup>

Given a choice between investing in new facilities or leasing facilities at a below-market regulated rate from a cable company or other competitor with an established network, many potential BDS providers will choose the latter. When competing providers have little incentive to build their own facilities, which most likely means not laying new fiber networks that can be used for future 5G applications, any competitive benefits they bring to the market will be short-lived at best, as existing facilities are shared but not expanded. Eventually this will lead to artificial scarcities in the network infrastructure, because providers that own the existing infrastructure will be discouraged from improving the network when they know they will have to lease the improved facilities to their competitors.<sup>41</sup>

Subjecting the BDS market to rate regulation and access mandates will lead to lost opportunities from foregone investment that would otherwise continue to facilitate improvements in the reach of the BDS networks, the quality of service, and the services that can be offered. Moreover, the BDS market has continued to evolve rapidly in an increasingly competitive direction, which is to the benefit of customers in an unregulated market. In fact, the rapidity of change makes it difficult, if not impossible, for regulators to keep up with the data needed to assess the competitiveness of a changing, technologically dynamic market.

## Conclusion

Some regulation will always be necessary for addressing certain specific market failures that are not fully addressed in an unregulated market. Too many current prescriptive, overly broad telecommunications regulations, however, were not designed to address market failures but rather to try to anticipate all conceivable possible harms, however unlikely they were to ever materialize. Other regulations have become outdated as markets and technologies changed.

The telecommunications sector is vital to the U.S. economy, both for its size and for the ways other sectors of the broader economy rely on telecommunications in their businesses and for their own innovation. The recent performance of the telecommunications sector lags behind even the recent slow growth in the rest of the U.S. economy. Especially in the last several years of the Wheeler Commission, investment has been discouraged by the heavy and growing telecommunications regulatory burden. Moreover, resources devoted to regulatory compliance are diverted from more productive uses, which generally are much more beneficial to customers.

The newly constituted FCC, under Chairman Ajit Pai's leadership, already has demonstrated its interest in encouraging the deployment of new infrastructure investment by eliminating or

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<sup>40</sup> *Id.*, at 390.

<sup>41</sup> Cooper, *supra* note 10.

curtailing those regulations that no longer are necessary. This is an encouraging development for telecommunications investment. At a time when both the telecommunications sector and the broader U.S. economy are experiencing a long period of slow growth, reducing the regulatory burden on the telecommunications sector promises to unleash capital investment that can give the overall economy a greatly needed boost.

\* Theodore R. Bolema is a Senior Fellow of the Free State Foundation, an independent, nonpartisan free market-oriented think tank located in Rockville, Maryland.



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**Allow Paid Prioritization on the Internet for More, Not Less,  
Capital Investment**

by

**Theodore R. Bolema\***

**I. Introduction and Summary**

Paid prioritization is an agreement between a broadband provider and an “edge provider,” or provider of content or services over the Internet, that allows the edge provider to pay for priority treatment in a “fast lane” to jump around congestion on the Internet.

Net neutrality proponents argue that having a fast lane for those willing to pay for it would place their competitors in the “slow” lane at a disadvantage. Moreover, they sometimes claim that broadband providers have the incentive to make the slow lane even less attractive by avoiding investing in it, so that firms in the slow lane would eventually be forced to pay to move to the fast lane. Thus, they argue, regulatory intervention is needed to protect those left in the slow lane.

In its March 2015 *Open Internet Order*, the Federal Communication Commission’s response was to prohibit broadband providers, on a blanket basis, from charging for paid prioritization. The 2015 Commission majority argued that by taking away this potential revenue source for broadband providers, the FCC would give them the incentive to increase their investment in



broadband capacity.<sup>42</sup> Significantly, the FCC adopted the blanket ban on paid prioritization even though, to that point, under the Commission’s previous light touch” regulatory regime, Internet service providers (ISPs) had not adopted in any meaningful way the paid prioritization practices that the agency decided to prohibit based on speculative potential harms.

The FCC will now be reexamining the existing net neutrality rules, including the blanket ban on paid prioritization, in the new rulemaking announced by Chairman Ajit Pai on April 26.<sup>43</sup> As FCC Commissioner Michael O’Rielly stated at the time of Chairman Pai’s announcement: “Even ardent supporters of net neutrality recognize, as I’ve said before, that some amount of traffic differentiation or ‘prioritization’ must be allowed or even encouraged.”<sup>44</sup>

My two previous *Perspectives* discussed the relationship between regulation and investment. The first, [Understanding Why More Regulation Means Less Investment](#), showed how, as a general proposition across industries, more regulation has several negative implications for capital investment in an industry. The second, [How Too Much Unnecessary Regulation Is Impeding Telecommunications Sector Investment](#), showed how accumulating regulatory burdens has led to less investment in the telecommunication sector, and applied the key principles to three current regulatory issues that have significant implications for telecommunications investment.

Now, this timely *Perspectives* applies this analysis to a specific regulatory restriction, the ban on paid prioritization in the FCC’s 2015 *Open Internet Order*. It describes how, despite the claim by the FCC majority in 2015 that this restriction will lead to more capital investment in broadband infrastructure, banning paid prioritization, along with the other adverse effects of the *Open Internet Order*, has held back investment in broadband infrastructure. This loss of infrastructure investment will only increase over time. This *Perspectives* then describes how similar paid prioritization practices in other industries have led to more capital investment and greater benefits for ultimate consumers. It also discusses certain industries that are likely to be held back in the future because they are prohibited from paying for the prioritization they will need to assure the quality of their service.

The FCC majority asserted in 2015 that unregulated broadband providers have an economic incentive to restrict end users and edge providers from freely connecting. Using paid prioritization to restrict access, the FCC argued, lets broadband providers (1) reduce their cost of making new capacity investment and (2) increase their profits by extracting payments from edge providers competing for limited capacity that has been restricted by the lack of investment. Thus, under the FCC’s conjecture, banning providers from charging for faster access or other enhancements to their service was supposed to take away the incentive for ISPs to “choke” consumer demand for its product, and instead encourage them to invest more in broadband infrastructure.

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<sup>42</sup> Federal Communications Commission, FCC-15-24, In Re Protecting and Promoting the Open Internet (hereinafter *Open Internet Order*), March 12, 2015 at ¶ 18 (footnotes omitted).

<sup>43</sup> Ajit Pai, “Remarks of FCC Chairman Ajit Pai at the Newseum: “The Future of Internet Freedom,” (Speech, Washington, DC, April 28, 2017), available at <https://www.fcc.gov/document/chairman-pai-speech-future-internet-regulation>.

<sup>44</sup> Michael O’Rielly, “Remarks of FCC Commissioner Michael O’Rielly at the FreedomWorks and Small Business & Entrepreneurial Council Event (Speech, Washington, DC, April 28, 2017), available at <https://www.fcc.gov/document/commissioner-orielly-remarks-freedomworks-sbe-council-event>.

The FCC's justification for banning paid prioritization is little more than the theory of how a monopolist protected from competition can restrict output in order to drive up prices. This theory does not apply, however, when a broadband provider does not have a large enough market share and faces current competition, because any attempts to extract high and inefficient tolls will be defeated when customers switch to a competing provider.

Moreover, if entry by other providers is reasonably easy, even a firm that is currently a monopolist will see that any inefficient tolls it imposes will only give other providers more incentive to enter the market and take its customers. When entry like this can occur, profits based on taking advantage of leverage from high market shares in a dynamic market are not sustainable because they attract new investment and entry by competitors.

Rather than address any possible concerns, however conjectural, about consumer harm in ways that will encourage more competition, the FCC chose to take a regulatory approach that will only discourage new entry and investment by ISPs. Limiting the revenue streams and pricing arrangements for new entrants reduces their incentive to make the investments necessary to enter and compete effectively against current broadband providers.

Various forms of paid prioritization arrangements can be found in many different industries, including grocery stores, book store chains, air travel, sports stadiums, and package delivery services. Governments seeking to attract private investment for road construction are expanding their optional toll lanes for commuters willing to pay to avoid congestion. Having prioritization as a revenue source increases the incentive for providers in other industries to make capital investments needed to compete for customers willing to pay for priority service. These capital investments provide benefits to all customers, even the ones who are not paying for prioritization. In general, these pricing arrangements have not worked to exclude those who do not pay for prioritization, and more typically lead to lower prices and better service for the most cost-conscious customers.

Autonomous vehicles, interactive e-learning, and telemedicine are examples of applications in their early stages of development that require a high level of end-to-end reliability. Investors may be unwilling to take the risk of investing in these applications if they cannot be assured of reliable prioritized broadband connections. Some edge providers that are sensitive to delays may be better off paying extra, in the same way that some people shipping packages are willing to pay extra for priority mail services, while others will not see enough benefit from avoiding delays to justify paying more.

Governmental units in the future may find that Amber alerts, severe weather alerts, and Homeland Security warnings should be given priority over other Internet traffic. As emergency services evolve, governments may want to have paid prioritization available as an option for these and other highly time-sensitive functions.

Paid prioritization should not be treated as unambiguously pro-competitive or anticompetitive on a blanket basis. Less intrusive responses used to address market failures and inefficiencies in other industries, including antitrust, consumer protection laws, and minimum quality standards, may be sufficient to prevent the harms that could plausibly result from paid prioritization by

broadband providers. These alternative approaches have the advantage of not destroying the real benefits and efficiencies that can be achieved using voluntary contracting arrangements, which will encourage more investment by both broadband providers and edge providers whose applications require fast and reliable broadband connections.

In the absence of much evidence of actual harm from paid prioritization on the Internet, the FCC should proceed with caution. Whatever policy the FCC develops, it should seek to address the specific harm that arises from clearly anticompetitive instances of paid priority, while encouraging the experimentation and innovation that will attract capital investment and provide benefits to consumers.

## II. The FCC's Ban on Paid Prioritization

The FCC based its ban on paid prioritization on the Internet in large part on what it called the “virtuous cycle” theory:

The key insight of the virtuous cycle is that broadband providers have both the incentive and the ability to act as gatekeepers standing between edge providers and consumers. As gatekeepers, they can block access altogether; they can target competitors, including competitors to their own video services; and they can extract unfair tolls. Such conduct would, as the Commission concluded in 2010, “reduce the rate of innovation at the edge and, in turn, the likely rate of improvements to network infrastructure.” In other words, when a broadband provider acts as a gatekeeper, it actually chokes consumer demand for the very broadband product it can supply.<sup>45</sup>

This questionable theory gave the FCC the basis for arguing that its restrictions on broadband providers would encourage investment by ISPs by taking away their incentive to restrict output and drive up their tolls. In doing so, the Internet would be divided into “fast lanes” for those who pay the tolls and “slow lanes” for those that don't. Thus, the FCC adopted the following prohibition:

No Paid Prioritization. Paid prioritization occurs when a broadband provider accepts payment (monetary or otherwise) to manage its network in a way that benefits particular content, applications, services, or devices. To protect against “fast lanes,” this Order adopts a rule that establishes that:

A person engaged in the provision of broadband Internet access service, insofar as such person is so engaged, shall not engage in paid prioritization. “Paid prioritization” refers to the management of a broadband provider's network to directly or indirectly favor some traffic over other traffic, including through use of techniques such as traffic shaping, prioritization, resource reservation, or other forms of preferential traffic management, either (a) in exchange for consideration (monetary or otherwise) from a third party, or (b) to benefit an affiliated entity.<sup>46</sup>

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<sup>45</sup> *Id.* at ¶ 20 (footnotes omitted).

<sup>46</sup> *Id.* at ¶ 18 (footnotes omitted).

### III. How the FCC's Ban on Paid Prioritization Discourages Capital Investment

The FCC majority asserted in 2015 that unregulated broadband providers have an economic incentive to restrict end users and edge providers from freely connecting. Doing so, the FCC argued, offers broadband providers two benefits: They can avoid the cost of making new investments and they can increase their profits by extracting payments from edge providers competing for limited capacity that has been restricted by the lack of investment. Thus, under the FCC's conjecture, banning providers from charging for faster access or other enhancements to their service was supposed to take away the incentive for ISPs to "choke" consumer demand for its product, and instead encourage them to invest more in broadband infrastructure.

The 2015 FCC majority offered very little evidence that these conjectured harms were occurring, despite the history of the Internet having been allowed to develop to that point with only "light touch" regulatory oversight. As then-Commissioner Ajit Pai pointed out in his dissent to the Open Internet Order:

Nevertheless, the Order ominously claims that "[t]hreats to Internet openness remain today," that broadband providers "hold all the tools necessary to deceive consumers, degrade content or disfavor the content that they don't like," and that the FCC continues "to hear concerns about other broadband provider practices involving blocking or degrading third-party applications." The evidence of these continuing threats? There is none; it's all anecdote, hypothesis, and hysteria. A small ISP in North Carolina allegedly blocked VoIP calls a decade ago. Comcast capped BitTorrent traffic to ease upload congestion eight years ago. Apple introduced FaceTime over Wi-Fi first, cellular networks later. Examples this picayune and stale aren't enough to tell a coherent story about net neutrality. The bogeyman never had it so easy.

But the Order trots out other horrors: "[B]roadband providers have both the incentive and the ability to act as gatekeepers," "the potential to cause a variety of other negative externalities that hurt the open nature of the Internet," and "the incentive and ability to engage in paid prioritization" or other "consumer harms." The common thread linking these and countless other exhibits is that they simply do not exist. One could read the entire document—and I did—without finding anything more than hypothesized harms. One would think that a broken Internet marketplace would be rife with anticompetitive examples. But the agency doesn't list them. And it's not for a lack of effort.<sup>47</sup>

Apart from the thinness of evidence of actual harm from any existing Internet practices, the FCC's theory is little more than the standard economic analysis of the incentives of a monopolist or firm in a highly-concentrated market to restrict output in order to drive up prices. For this theory to be plausible, two conditions must be met: The broadband provider (1) must have a large market share and (2) must have some protection from new firms entering the market.

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<sup>47</sup> Dissenting Statement of Commissioner Ajit Pai, *Open Internet Order* (footnotes omitted).

If, however, the broadband provider does not have a large market share and faces current competition, then any attempts to extract high and inefficient tolls will be defeated when customers switch to a competing provider. And if entry by other providers is reasonably easy, then even a firm that is currently a monopolist will see that any inefficient tolls it imposes will only give other providers more incentive to enter the market and take its customers.

Thus, profits based on taking advantage of leverage from high market shares in a dynamic market are not sustainable because they attract new entry and investment by competitors. More competition like this should be encouraged, because it defeats the incentive to restrict capacity described by the “virtuous cycle” theory, and also bring new firms into the market that can be the source of new innovation.

Rather than address any possible concerns, however conjectural, about consumer harm in ways that will encourage more competition, the FCC chose to take a regulatory approach that can only discourage new entry and investment. As Commissioner Michael O’Rielly pointed out in his dissent to the *Open Internet Order*:

And yet, literally nothing in this Order will promote competition among Internet service providers. To the contrary, reclassifying broadband, applying the bulk of Title II rules, and half-heartedly forbearing from the rest “for now” will drive smaller competitors out of business and leave the rest in regulatory vassalage. Monopoly rules designed for the monopoly era will inevitably move us in the direction of a monopoly.<sup>48</sup>

By restricting how ISPs can benefit from their new investments, the FCC made entry and new capital investment by potential competing broadband providers less attractive for new providers. Unless incumbent providers can be confident that they are well-insulated from new competition or expansion by smaller providers, they do not have the incentive to restrict capacity to raise tolls, because other providers can provide that capacity through their investments.

The 2015 FCC majority’s analysis of how banning paid prioritization will encourage more investment is contradicted by conventional economic analysis, and now is being exposed as misguided by the recent decline in capital investment. My previous *Perspectives*, [How Too Much Unnecessary Regulation Is Impeding Telecommunications Sector Investment](#), described the growing evidence that accumulating regulatory burdens generally in the telecommunication sector have been accompanied by less capital investment in broadband capacity. There is also considerable evidence and analysis from other markets where paid prioritization has been used, which shows that the paid prioritization arrangements that develop without regulatory intervention generally benefit consumers and lead to more capital investment in their industries.

#### **IV. Consumers Benefit from Paid Prioritization in Many Markets**

Paid prioritization is used in many markets, regulated and unregulated. It takes a variety of different forms, so that it is possible to point out differences between the paid prioritization in different markets. Even so, it is striking how common the practice is, and how widely accepted different forms of paid prioritization have become in other markets. More to the point, these

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<sup>48</sup> Dissenting Statement of Commissioner Michael O’Rielly, *Open Internet Order* (footnotes omitted).

forms of paid prioritization do not lead to firms trying to choke off demand for their products. More typically, they lead to more investment and more choices that benefit customers.

Many states now offer optional “fast lanes” on highways, for a toll, as a way of attracting investment for highway projects.<sup>49</sup> Commuters who want to avoid the tolls are not excluded from the highway, while commuters willing to pay for a faster trip have that option. Virginia has used the optional toll system to attract private investment for highway construction, and recently announced that it had attracted new private investment to expand the optional toll network to another stretch of highway I-395. Terry McAuliffe, Virginia’s Democratic governor, touted this expansion as “the latest step in our ongoing effort to move more people and provide more travel choices in one of the most congested corridors in the country.”<sup>50</sup> Even the drivers who do not pay the toll benefit from the private investment and expansion of the highway, which reduces congestion in the non-toll lanes while giving them the option to use the faster toll lanes when they wish to use them.

One paid prioritization practice that has been extensively analyzed over many years by the U.S. antitrust agencies is the payment of slotting allowances at grocery stores, bookstores, and other retailers.<sup>51</sup> A supplier seeking to sell its merchandise at a retailer may agree to pay a slotting allowance to have its products placed on the most favorable shelf space, while other suppliers may be willing to accept less favorable shelf space. Rather than excluding new suppliers, paying for favorable slotting may be an effective strategy for introducing new products that would otherwise require more spending on advertising and other forms of marketing. Notably, some major retailers, including Wal-Mart, choose not to charge slotting allowances, while other retailers have charged them for decades. Former Federal Trade Commissioner Joshua D. Wright, in his review of the economic effects of slotting allowances, finds that the practice generally benefits consumers:

My results show that slotting contracts are primarily associated with brand-shifting of sales within a product category, but not increases in category level prices or a reduction in category output or variety. To the extent that slotting contract revenue is passed on to consumers in competitive retail markets, an assumption generally warranted in the grocery retail industry, the results here imply that slotting contract competition is likely to benefit consumers. In sum, my findings are inconsistent with anticompetitive theories and, in practice, demonstrate that such agreements are likely procompetitive and consistent with the promotional services theory.<sup>52</sup>

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<sup>49</sup> Robert Krol, “Tolling the Freeway: Congestion Pricing and the Economics of Managing Traffic.” Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, May 5, 2016, available at <https://www.mercatus.org/publication/tolling-freeway-congestion-pricing-and-economics-managing-traffic>.

<sup>50</sup> Terry McAuliffe, “Governor McAuliffe Announces Acceptance of Private Sector Proposal to Deliver I-395 Express Lanes Extension, News Release, February 25, 2017, available at <https://governor.virginia.gov/newsroom/newsarticle?articleId=19616>.

<sup>51</sup> See, e.g., Federal Trade Commission Staff Study, “Slotting Allowances in the Retail Grocery Industry, Selected Case Studies in Five Product Categories,” Nov. 2003, available at <https://www.ftc.gov/reports/use-slotting-allowances-retail-grocery-industry>.

<sup>52</sup> Joshua D. Wright, “Slotting Contracts and Consumers Welfare,” *Antitrust Law Journal*, Vol. 74, No. 2 (2007), 439, at 440.

The paid prioritizations prohibited by the *Open Internet* Order, the slotting allowances charged by retailers, and optional toll fast lanes on highways all take the form of upstream parties paying the downstream distributors for favorable treatment. Final consumers in these markets are not directly involved in forming the paid prioritization arrangement, but they are still affected by the arrangements. In other markets, however, final customers have shown they are willing to enter into paid prioritization arrangements from the downstream side of the transaction, and usually are better off for it.

Airlines charge passengers extra for a variety of different enhanced services, including first class seats, priority boarding, seats with extra leg room, and seats near the front of the airplane. The airlines' goal is not to exclude passengers who do not pay for these services or force them to pay higher fares. In fact, the opposite is much more likely. Regular air travelers can see that airlines try to fill as many seats as they can, and even market "bare bones" fares that may not include any choice of seat, for example. The customers who do not pay extra for better service are unlikely to be made worse off by having other customers on the plane who choose to pay extra for better service. Instead, it is more likely that customers who pay less are better off if the airline chooses to offer more flights over more routes to attract customers willing to pay extra, and then offers lower fares to fill the remaining seats on those flights. Put another way, forcing airlines to charge the same fares for everyone will almost certainly lead to fewer flights and routes, as well as less investment for increasing capacity, all of which will raise fares and reduce choices for the most cost-conscious customers, leaving them worse off as a result.

Similarly, sports stadiums have luxury boxes and favorable seating available for higher prices, but that does not mean the stadium operators want to exclude other customers who are unwilling to pay for premium seating or amenities, or build smaller stadiums to restrict the supply of seats in order to drive up prices. Having some customers pay extra for better seats generates revenue that may be used to upgrade the stadium, to offer extra amenities that may be available to all customers, or to attract free agent professional players to make their teams more competitive, all of which may make seeing the games more enjoyable for all fans, even the ones paying the least.

Of course, the U.S. Postal Service also offers its own fast lane and slow lane for customers. Customers can pay for various forms of expedited delivery for packages and mail, or they can pay regular postage or bulk rates for mail that will be delivered on a slower schedule. Federal Express and other private delivery services offer similar expedited "fast lane" schedules, but that has not given them the incentive to slow down deliveries of packages for customers who do not pay extra for higher priority deliveries.<sup>53</sup>

These and other variations on paid prioritization have developed over time, as suppliers, distributors, and customers have experimented in the market to find the arrangements that provide the greatest benefits. So long as markets are reasonably competitive, arrangements that try to take advantage of other parties will not survive for long, because the parties at a disadvantage can find alternative arrangements.

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<sup>53</sup> See Kenneth Button and David Christiansen, "Unleashing Innovation: The Deregulation of Air Cargo Transportation." Mercatus on Policy, Mercatus Center at George Mason University, Arlington, VA, December 15, 2014, available at <https://www.mercatus.org/publication/unleashing-innovation-deregulation-air-cargo-transportation>.

## **V. When Paid Prioritization May Be Necessary for Attracting Investment.**

Some specialized services for dedicated users require a high level of end-to-end reliability. The benefits from video phone calls and video streams from Netflix, for example, are reduced when they are delayed by slow buffering. Other Internet uses do not necessarily require a prioritized Internet connection. Email traffic, most file downloading, and many other uses lose little of their value if their transmission is delayed somewhat in a slow lane, although too long a delay could diminish their value.

Governmental units in the future may find that Amber alerts, severe weather alerts, and Homeland Security warnings should be given priority over other Internet traffic. As emergency services evolve, governments may want to have paid prioritization available as an option for these and other highly time-sensitive functions.

As capital investment in broadband capacity continues to decline and demand for Internet services increases, the ban on paid prioritization will affect both services that are sensitive to delays and services that are not. Those that are harmed may be better off paying extra, in the same way that some people shipping packages are willing to pay extra for priority mail services, while others will not see enough benefit from avoiding delays to justify paying more.

The analysis above describes how slotting allowances in retail stores are more likely to encourage entry by new suppliers rather than discourage them from entering. For many new suppliers, paying for favorable slotting may be a cost-effective strategy for introducing a new product. Similarly, paid prioritization could be cost effective for Internet start-ups to allow the new entrants to promote their services as being in the “fast lane,” and therefore give them more incentive to invest in their own operations.

Many future web applications are unlikely to develop if their developers cannot be assured that they will have access to fast and stable Internet connections. Autonomous vehicles, interactive e-learning, and telemedicine are examples of applications in their early stages of development. Investors may be unwilling to take the risk of investing in these applications if they cannot be assured of reliable prioritized broadband connections.

The FCC’s prohibition against charging for paid prioritization may well prevent these services from developing, as well as other new applications that no one is yet anticipating. Their loss is difficult to measure because we cannot easily anticipate what will never happen. Less intrusive responses used to address market failures and inefficiencies in other industries, including antitrust, consumer protection laws, and minimum quality standards, may be sufficient to prevent the harms that could plausibly result from paid prioritization by broadband providers. These alternative approaches have the advantage of not destroying the real benefits and efficiencies that can be achieved using voluntary contracting arrangements, and not driving off investment for the applications and new entrants that may require fast and reliable broadband connections.

## **Conclusion**



Paid prioritization should not be treated as unambiguously pro-competitive or anticompetitive on a blanket basis. Paid prioritization potentially can discourage investment, and can lead to harm to final customers when too little investment in infrastructure may give ISPs market power as they allocate limited capacity.

Addressing these situations with a sweeping regulatory ban on paid prioritization creates two problems that are likely to be worse than the problem the regulation is intended to address. First, such a ban prevents the paid prioritization arrangements that benefit final customers, who may want to pay extra for the reliability needed for their applications. Second, the ban on paid prioritization limits the return on investment by ISPs, so that they will invest less in situations where they do not have market power and protection from new entry.

Any concerns about broadband providers having market power and abusing it should be addressed in a more focused way on a case-by-case basis that does not throw out the baby with the bathwater. In the absence of much evidence of actual harm from paid prioritization on the Internet, the FCC should proceed with caution. Whatever policy the FCC develops, it should seek to address the specific harm that arises from clearly anticompetitive instances of paid priority, while encouraging the experimentation and innovation that will attract capital investment and provide benefits to consumers.

\* Theodore R. Bolema is a Senior Fellow of the Free State Foundation, an independent, nonpartisan free market-oriented think tank located in Rockville, Maryland.